## REMARKS

Claims 1-84 are pending in this application. Claims 24-47 have been withdrawn from further consideration as being drawn to nonelected subject matter. Claims 1-23 and 48-84 were provisionally rejected as allegedly being unpatentable under the judicially created doctrine of obviousness-type double patenting. Claims 13, 29-31, 60, 66, 67, and 73 were rejected under 35 U.S.C. §112, second paragraph. Claims 1-23 and 48-84 were variously rejected under 35 U.S.C. §102(b) and §102(e).

By this amendment, claims 2, 3, 49, and 50 have been canceled and claims 1, 13, 48, 60, 70, and 73 have been amended without prejudice or disclaimer of any previously claimed subject matter. Support for the amendments can be found, *inter alia*, throughout the specification, for example, in original claim 2. Applicants respectfully request entry of this amendment.

The amendments are made solely to promote prosecution without prejudice or disclaimer of any previously claimed subject matter. With respect to all amendments and cancelled claims, Applicants have not dedicated or abandoned any unclaimed subject matter and moreover have not acquiesced to any rejections and/or objections made by the Patent Office. Applicants expressly reserve the right to pursue prosecution of any presently excluded subject matter or claim embodiments in one or more future continuation and/or divisional application(s).

Applicants have carefully considered the points raised in the Office Action and believe that the Examiner's concerns have been addressed as described herein, thereby placing this case into condition for allowance.

Rejections Under Provisional Obviousness-Type Double Patenting

Claims 1-23 and 48-84 were provisionally rejected under the judicially created doctrine of obviousness-type double patenting as allegedly being unpatentable over claims 1-15, 18-22, 27-29 and 51-62 of copending Application No. 10/214,799.

Applicants thank the Examiner for bringing the co-pending application to Applicants' attention. Since this is a provisional obviousness-type double patenting rejection and there are no issued claims, there is nothing to disclaim at this time. Thus, this rejection is moot.

Rejection under 35 U.S.C. §112, second paragraph

Claims 13, 29-31, 60, 66, 67, and 73 were rejected under 35 U.S.C. §112, second paragraph, as allegedly being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. Applicants respectfully traverse this rejection.

Although Applicants believe that the claims were sufficiently definite when considered in view of the specification and the understanding of those of skill in the art, Applicants have attempted to respond to the concerns of the Examiner in order to enhance clarity and to facilitate disposition of the present case.

In view of the foregoing, Applicants respectfully request reconsideration and withdrawal of the rejection under 35 U.S.C. § 112, second paragraph.

Rejections under 35 U.S.C. §102

*35 U.S.C. § 102(b)*

Claims 1-23 and 48-84 were rejected under 35 U.S.C. §102(b) as allegedly being anticipated by Carson *et al.* (WO 98/16247, "Carson"), WO 99/11275 or Schwartz *et al.* (WO 98/55495, "Schwartz"). Applicants respectfully traverse these rejections.

Schwartz, Carson and Raz describe compositions variously comprising ISS-containing polynucleotides, antigens and adjuvants, however, Applicants respectfully submit that these references do not anticipate the claimed invention.

In support of the rejection, the Examiner states that "[e]ven though the art does not specifically states that the IMP is linked to the surface of the microcarrier, this is inherent since the components and procedures are the same in the prior art references and the claimed invention and specification." Office Action, pages 7-8.

Since inherency is being relied upon for this rejection, "the examiner must provide a basis in fact and/or technical reasoning to reasonably support the determination that the allegedly inherent characteristic necessarily flows from the teachings of the applied prior art." *Ex parte Levy*, 17 USPQ2d 1461, 1464 (BPAI, 1990) (emphasis in original). "To establish inherency, the extrinsic evidence 'must make clear that the missing descriptive matter is necessarily present in the thing described in the reference, and that it would be so recognized by persons of ordinary skill. Inherency, however, may not be established by probabilities or possibilities. The mere fact that a certain thing may result from a given set of circumstances is not sufficient.'" *In re Robertson*, 169 F.3d 743, 745, 49 USPQ2d 1949, 1950-51 (Fed. Cir. 1999); M.P.E.P. §2112.

Since the Office states that compositions described in the cited references inherently include the IMP/MC as claimed, it must show that these compositions would be recognized by persons of ordinary skill as necessarily present in those references. As discussed herein, this showing has not been provided by the Office.

As amended herein, the claimed invention is directed to a complex (IMP/MC) comprising a 5'-CG-3'-containing polynucleotide (IMP) covalently linked to the surface of a biodegradable microcarrier (MC). In the claimed IMP/MC complex, the polynucleotide is greater than 6 nucleotides in length and the MC is less than 10 μm.

For a claim to be anticipated by a reference, the reference much teach each and every element of the claim. As discussed below, none of the cited references either explicitly or inherently teach a 5'-CG-3'-containing polynucleotide covalently linked to the surface of a biodegradable microcarrier. Accordingly, Applicants respectfully submit that the references do not anticipate the claimed invention.

As the Examiner points out, Schwartz describes various combinations of immunostimulatory polynucleotides, antigens and/or adjuvants, where the term "adjuvant" includes polylactide/polyglycolide microparticles. Schwartz also describes that conjugates of these various components can be made through covalent interactions. Although Schwartz describes conjugates of immunostimulatory polynucleotides, antigens and/or adjuvants, Schwartz does not explicitly describe a complex in which an IMP is covalently linked to the surface of a microcarrier less than 10 μm in size as claimed.

Further, Applicants respectfully submit that the claimed complex, *i.e.*, an IMP covalently linked to the surface of a biodegradable microcarrier, does not necessarily flow from Schwartz's general description of the various components. Thus, Schwartz does not anticipate the claimed invention

At page 5, lines 11-14, Carson describes that the immunomodulatory molecule (IMM) conjugate partner comprises an antigen and further comprises and adjuvant. This disclosure is further elaborated at page 20 in the section entitled "IMM conjugate partners" where Carson further describes that among useful adjuvants are "microspheres." Thus, Carson describes that an IMM can comprise an antigen and a microsphere adjuvant. Carson does not describe that an immunostimulatory polynucleotide is directly linked to the microsphere. Carson does not describe that an IMP is covalently linked to the surface of a microcarrier as claimed, nor that the microsphere is biodegradable, nor that the microsphere is less than 10 μm in size. Applicants respectfully submit that the claimed complex, *i.e.*, an IMP covalently linked to the surface of a

biodegradable microcarrier less than 10 μm in size, does not necessarily flow from Carson's general description of an antigen and microsphere conjugate. Thus, Carson does not anticipate the claimed invention.

WO 99/11275 describes administration of an immunostimulatory polynucleotide without co-delivery of an immunizing antigen. At the page 4 citation pointed out by the Office, WO 99/11275 describes that an ISS-ODN can be administered in the form of an adjuvant mixed with or conjugated to an ISS-ODN. However, other than the aluminum hydroxide used in the Examples, WO 99/11275 provides no teaching or description of what it intends as an adjuvant. Thus, WO 99/11275 does not describe that an IMP is covalently linked to the surface of a microcarrier as claimed.

At the page 19 citation pointed out by the Office, WO 99/11275 describes that a colloidal dispersion system, including microspheres, may be used to administer the immunostimulatory polynucleotide. However, this reference does not describe that the immunostimulatory polynucleotide is covalently linked to the colloidal dispersion system. Thus, this citation does not describe an IMP/MC complex as claimed.

Applicants respectfully submit that the claimed complex, *i.e.*, an IMP covalently linked to the surface of a biodegradable microcarrier, does not necessarily flow from this reference's disclosure of immunostimulatory polynucleotide administration. Thus, WO 99/11275 does not anticipate the claimed invention.

For a claim to be anticipated by a reference, the reference much teach each and every element of the claim. As noted above, the Examiner admits that the art does not explicitly describe the claimed invention. Further, the Examiner has not provided a basis in fact and/or technical reasoning to reasonably support the determination that the allegedly inherent characteristic necessarily flows from the teachings of any of the three cited references, Schwartz,

Carson or WO 99/11275. Accordingly, a *prima facie* case of inherent anticipation has not been established and Applicants respectfully submit that the references do not anticipate the claimed invention.

Accordingly, Applicants respectfully request reconsideration and withdrawal of the rejections under 35 U.S.C. §102(b).

*35 U.S.C. § 102(e)*

Claims 1-23 and 48-84 were rejected under 35 U.S.C. §102(e) as allegedly being anticipated by Friede *et al.* (U.S. Pat. No. 6,544,518, "Friede"). Applicants respectfully traverse this rejection.

For a claim to be anticipated by a reference, the reference much teach each and every element of the claim. As discussed below, Friede neither explicitly or inherently teaches a 5'-CG-3'-containing polynucleotide covalently linked to the surface of a biodegradable microcarrier. Accordingly, Applicants respectfully submit that the reference does not anticipate the claimed invention.

Friede describes compositions variously comprising CpG oligonucleotides, antigens and adjuvants. In support of the rejection, the Examiner states that "[e]ven though the art does not specifically state that the IMP is linked to the surface of the microcarrier, this is inherent since the components and procedures are the same in the prior art references and the claimed invention and specification." Office Action, page 9. Since the Office is saying that compositions described in Friede inherently include the IMP/MC as claimed, it must show that this is indeed the case. This showing has not been provided by the Office.

As the Examiner points out, Friede describes combinations of CpG oligonucleotides, antigens, adjuvants, and particulate carriers where such carriers can include liposomes,

emulsions, or microparticles. Friede does not describe a complex in which an IMP is covalently linked to the surface of a microcarrier as claimed.

Further, Applicants respectfully submit that the claimed complex, *i.e.*, an IMP covalently linked to the surface of a biodegradable microcarrier, does not necessarily flow from Friede's general description of the various components. Thus, Friede does not anticipate the claimed invention.

For a claim to be anticipated by a reference, the reference much teach each and every element of the claim. As noted above, the Examiner admits that the art does not explicitly describe the claimed invention. Further, the Examiner has not provided a basis in fact and/or technical reasoning to reasonably support the determination that the allegedly inherent characteristic necessarily flows from the teachings of Friede. Accordingly, a *prima facie* case of inherent anticipation has not been established and Applicants respectfully submit that the reference does not anticipate the claimed invention.

Accordingly, Applicants respectfully request reconsideration and withdrawal of the rejections under 35 U.S.C. §102(e).

In the §102 rejections, the Examiner states that "[s]ince the Patent Office does not have the facilities for examining and comparing applicants' complex and kit with the complex and kit of the prior art reference, the burden is upon the applicants to show a distinction between the material structural and function characteristics of the claimed complex and kit and the complex an kit of the prior art." Office Action, pages 5 and 8.

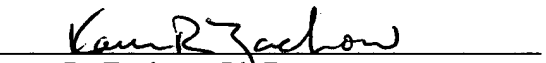
For the reasons stated herein, the claimed complexes and kits are already distinguished from that in the references by the pending claim language. Since anticipation has not been shown by the Office, Applicants are not under the burden of demonstrating a material, structural and functional distinction between the claimed compositions and the compositions in the cited references.

## CONCLUSION

In view of the above, each of the presently pending claims in this application is believed to be in immediate condition for allowance. Accordingly, the Examiner is respectfully requested to withdraw the outstanding rejection of the claims and to pass this application to issue. If it is determined that a telephone conference would expedite the prosecution of this application, the Examiner is invited to telephone the undersigned at the number given below.

In the unlikely event that the transmittal letter is separated from this document and the Patent Office determines that an extension and/or other relief is required, applicants petition for any required relief including extensions of time and authorize the Assistant Commissioner to charge the cost of such petitions and/or other fees due in connection with the filing of this document to **Deposit Account No. 03-1952** referencing docket No. 377882001420.

Respectfully submitted,

Dated: November 2, 2004 By: 

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